



Investment Office

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AGENDA ITEM 4c

TO: MEMBERS OF THE INVESTMENT COMMITTEE

- I. SUBJECT:** Investment Office Technology Update
- II. PROGRAM:** Total Fund
- III. RECOMMENDATION:** Information Only
- IV. ANALYSIS:**

In late 2006, ITSB and INVO started a collaborative process of developing a new technology support model designed to meet INVO's rapidly changing business needs. The objective was to establish a team of technical and analytical resources with specialized skill sets that is focused on and dedicated to addressing INVO's tactical and strategic technology needs. In early 2008, the AEO of ITSB began providing status updates to the Finance Committee and the CIO included technology as a component of his strategic plan. As part of the Mid-Year Budget Process for Fiscal Year 2007/2008, the Finance Committee approved nine (9) additional positions and \$1,262,000 in funding to augment the existing INVO support team in ITSB and form the Investment Technology Services Unit (ITSU).

This Agenda Item is intended to update the Committee on the implementation of the ITSU and to discuss the support improvements made thus far for the Internal Equity Program. In addition, at the June 2008 Investment Committee meeting, the Committee and staff discussed the findings of a review performed by Wilshire of the Internal Equity Investment Management Program. The review contained two specific recommendations. The first was related to the technology system used by the internal equity team and the second was related to the data set delivered by the master custodian. Both of these recommendations are addressed in this Agenda Item.

Investment Technology Support Unit

ITSU was formed in spring 2008 using a combination of existing and new IT resources to form a specialized technical support unit for INVO. This support team was established within ITSB; however, to facilitate information sharing and enhance service levels, many of the resources are housed within INVO.

As a result of the importance of direct, investment industry experience to the implementation of a complex investment technology solution, the majority of INVO's major projects (such as those underway for real estate and risk management) are being led by contractors specializing in investment business systems. The ITSU is responsible for developing technology strategy, developing automation alternatives based on business need and performing the ongoing maintenance and support of existing investment technology systems.

One of the key roles within the ITSU is that of the Chief Technologist. As previously reported, in July 2008, Martyn Greene was hired to serve as the Chief Technologist; he brings a wealth of investment and technology experience to his role. His experience includes serving as Chief Information Officer for Wachovia's capital and wealth management groups, Chief Information Officer for Evergreen Investments, President of Citco's technology management company as well as significant technology management experience at Franklin Templeton.

The Chief Technologist's first assignment was to become familiar with INVO's operations and, based on his findings and industry experience, develop a long term technology strategy focused on enhancing operational performance and capacity through the use of sustainable, reliable systems and data. Mr Greene completed the initial draft in October 2008; that is currently undergoing internal review and discussion in both ITSB and INVO. In early 2009, we plan to present the investment technology strategy to the Investment Committee.

In parallel with the strategy development, Mr. Greene has also become involved with INVO's technology projects and systems and has made meaningful contributions by providing needed direction and necessary enhancements.

Internal Equity Investment Management Program - Technology Support

Inefficiencies in both technology and processes were identified within Wilshire's review of the internal equity investment management program presented to the Committee in June. Examples of the inefficiencies include slow response times within the equity order management system (Charles River Development - CRD), and difficulty importing and manipulating trade lists within CRD that were created by other applications. These inefficiencies combine to restrict the ability of the internal equity program to grow in scale. As recommended by Wilshire, an in-depth review of the CRD system is currently being performed. The review has identified changes that should improve the performance of CRD and its related systems and processes so that they are more efficient.

In addition, Wilshire recommended engaging in a discussion with CalPERS master custodian, State Street Bank to evaluate options for service delivery improvements. Working with INVO, State Street has proactively identified options for service and data delivery changes that may result in performance improvements. While the nature and scope of the options are not yet complete, favorable progress has been made.

Overall, the scope of the changes underway involves technology systems and processes at external service providers and other investment technology systems used by INVO and CRD. The anticipated result will allow existing, unused capabilities to be enabled, further improving overall efficiencies.

Based on the in-depth review and analysis performed by Mr. Greene, he has concluded that the existing investment technology systems and services used by INVO and ITSB are among the leaders in the industry. However, much of the inefficiency and performance issues identified by Wilshire can be attributed to sub-optimal configuration of CRD and data exchange process that were established before current technology was widely available. Following the completion of the changes already underway, the restrictions identified by Wilshire that may have negatively impacted the program, should be mitigated.

V. STRATEGIC PLAN:

Goal VIII, manage the risk and volatility of assets and liabilities to endure sufficient funds are available, first to pay benefits, and second to minimize and stabilize contributions.

VI. RESULTS/COSTS:

There are no costs related to this item.

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